

IN THE DRAWINGS

Proposed changes to Figs. 1-7 are submitted herewith, with a
Submission of Proposed Drawing Changes.

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

The Applicants acknowledge with appreciation the indication in the Office Action that claim 5 is directed to allowable subject matter. Allowable claim 5 has been cancelled and rewritten as new claim 18. Claim 18 has been drafted to avoid the issue underlying the indefiniteness rejection applied to claim 5.

Replacement drawings for Figs. 1-7 are submitted herewith to overcome the objections thereto. Figs. 1-7 have been amended to include legends identifying them as related art.

The specification has been amended as requested in the Office Action. No new matter is believed to be introduced by the amendment.

Claims 1-14 have been canceled in favor of new claims 15-25. The subject matter of claims 15-24 is supported at least by claims 2-8, 10, 12 and 14, respectively, and has been drafted to avoid the issue underlying the objection applied to claim 4.

Claims 1, 2, 4, and 7-14 were rejected, under 35 USC §103(a), as being unpatentable over Applicants' Description of the Related Art in view of Awater et al. (US 6,175,551). Claims

3 and 6 were rejected, under 35 USC §103(a), as being unpatentable over the Applicants' Description of the Related Art in view of Awater and Verma (US 6,757,299). To the extent the rejections may be deemed applicable to new claims 15-17 and 19-24, the Applicants respectfully traverse based on the points set forth below.

Independent claim 15 corresponds to original claim 2 and recites the feature of regenerating a multi-carrier signal, when its peak power exceeds a threshold, by multiplexing a signal for suppressing the peak power on at least one subcarrier. The Office Action acknowledges that the Applicants' Description of the Related Art does not disclose this feature but proposes that Awater discloses it in Fig. 4 and column 4, line 67, through column 5, line 1 (see Office Action page 6, second paragraph).

However, the Applicants note that Awater discloses detecting the phase and amplitude for the portion of a multicarrier signal that exceeds a predefined amplitude (Awater col. 4, lines 60-62). For each signal peak that exceeds the predefined amplitude, an impulse is generated whose phase is equal to the peak phase and whose amplitude is equal to the peak amplitude minus the desired maximum amplitude (col. 4, lines 62-66). The generated impulses are lowpass filtered and inverse fast-Fourier transformed into a multicarrier signal that is subtracted from the detected

multicarrier signal so that its excessive peak signals are cancelled (col. 4, line 66, through col. 5, line 8).

In summary, Awater discloses: (1) generating signals corresponding in phase and amplitude to those within a multicarrier signal that exceed a threshold, (2) creating another multicarrier signal from the generated signals, and (3) subtracting the created multicarrier signal from the original multicarrier signals so as to eliminate the excessive signal portions within the original multicarrier signal. Simply put, Awater discloses synthesizing the portion of a multicarrier signal that exceeds a threshold value and subtracting the synthesized multicarrier signal from the original multicarrier signal so as to cancel the excessive portion of the original multicarrier signal.

The claimed subject matter differs from Awater in that a subtraction operation between two multicarrier signals is not used to obtain the ultimate multicarrier signal. Instead, the ultimate multicarrier signal is generated anew by replacing the information carried previously by one of the carriers with a signal that will suppresses the peak power of the regenerated multicarrier signal. Thus, the claimed invention differs from Awater in that it eliminates the information sequence carried by one carrier of the original multicarrier signal and replaces this

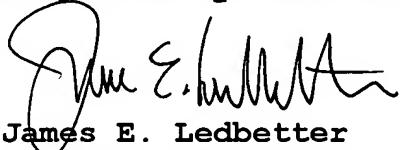
information sequence with a signal that will reduce the peak power of the replacement multicarrier signal. By contrast to this feature, Awater's ultimate multicarrier signal carries the same information sequences on its carriers as the original multicarrier signal, though the amplitude of some carriers may be reduced. Thus, modifying the Applicants' Description of the Related Art system based on Awater's teachings would not produce the subject matter defined by claim 15.

Accordingly, Applicants submit that the Applicants' Description of the Related Art and Awater, considered alone or in combination, do not render obvious the subject matter defined by claim 15. Independent claims 22-24 similarly recite the above described feature distinguishing apparatus claim 15 from the applied references, although claim 24 does so with respect to a method. Therefore, allowance of claims 15 and 22-24 and all claims dependent therefrom is warranted. Since base claims 15 and 22-24 distinguish over the Applicants' Description of the Related Art and Awater, the rejections applied to any dependent claims based upon Verma's additional teachings are moot.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



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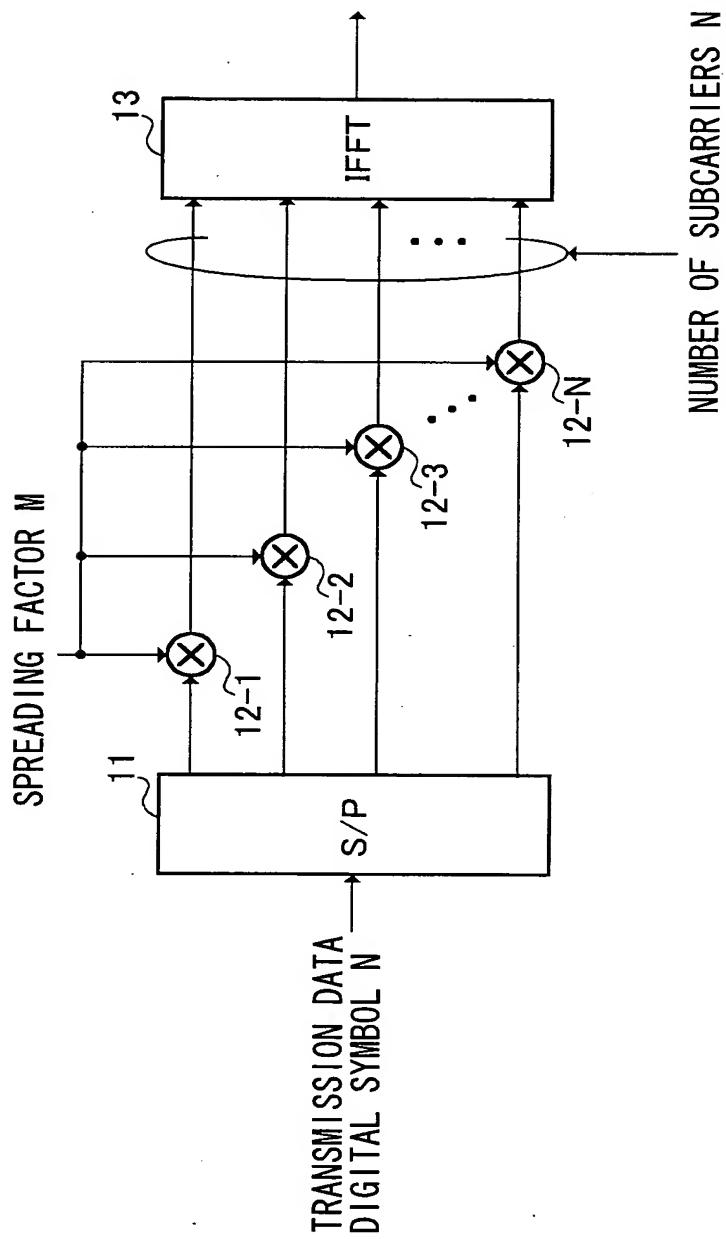
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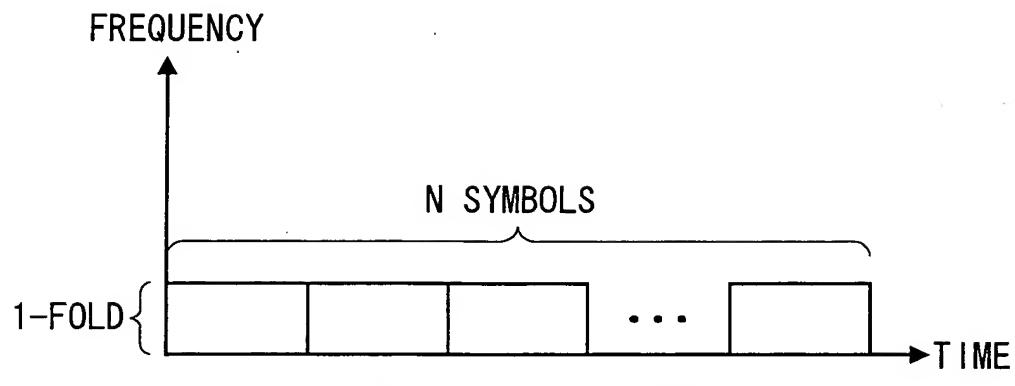


RELATED ART

FIG.1

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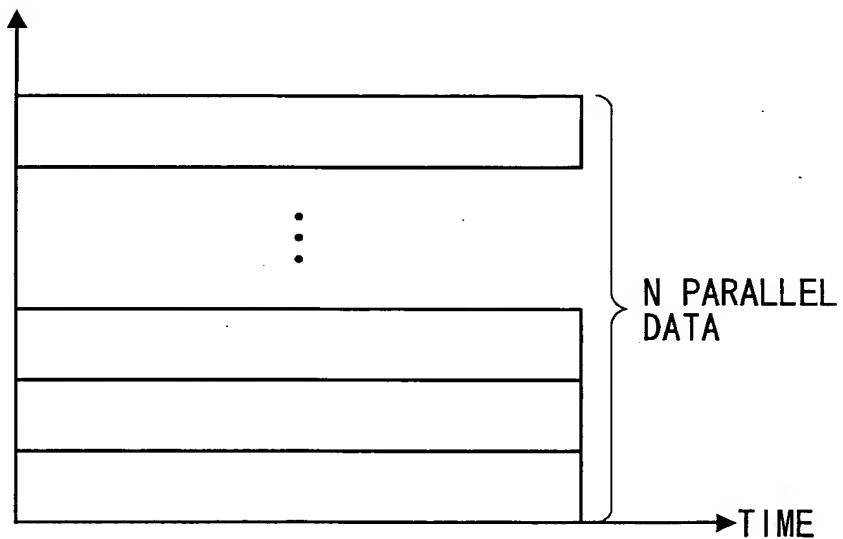
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RELATED ART

FIG.2

FREQUENCY

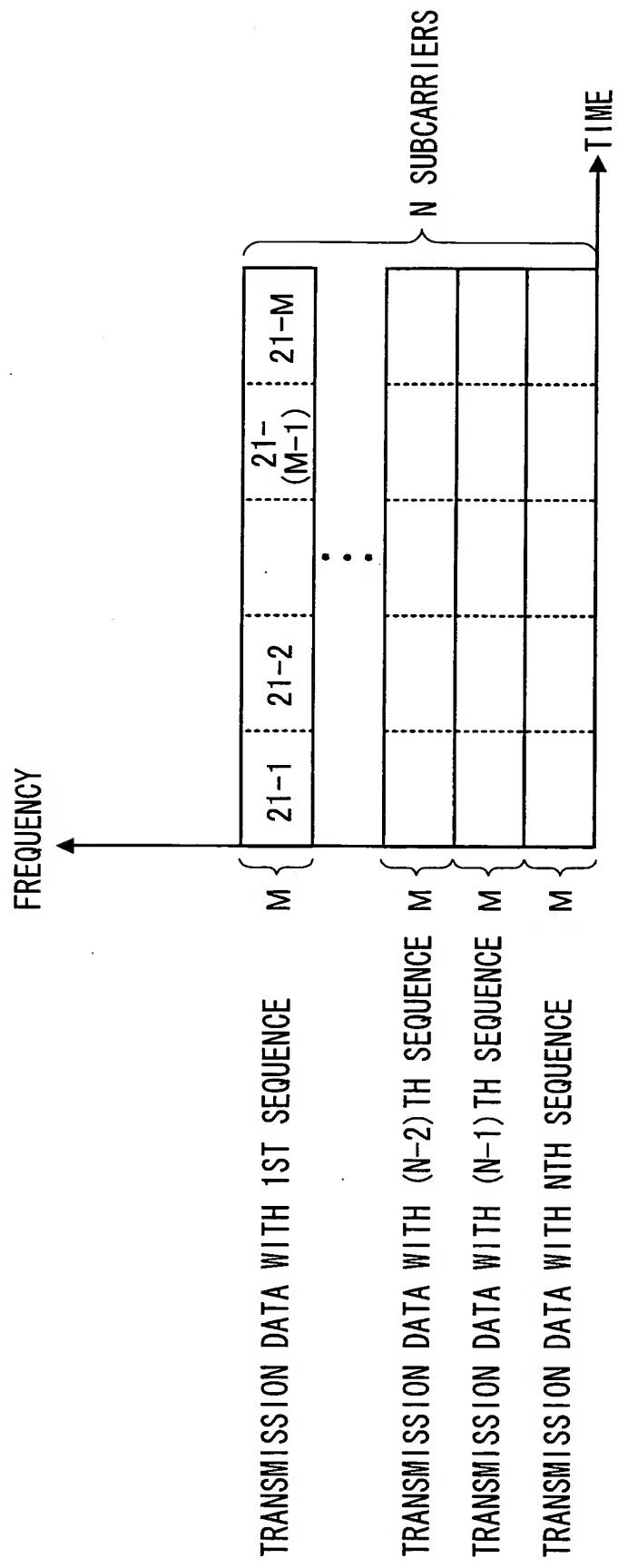


RELATED ART

FIG.3

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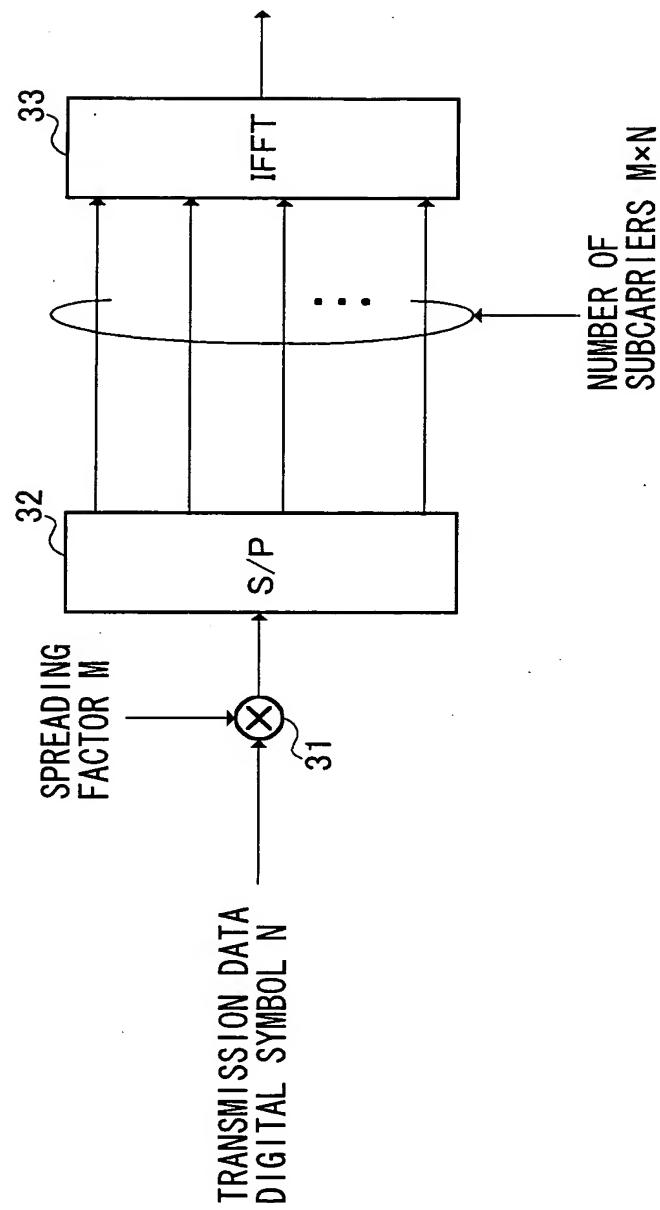


RELATED ART

FIG.4

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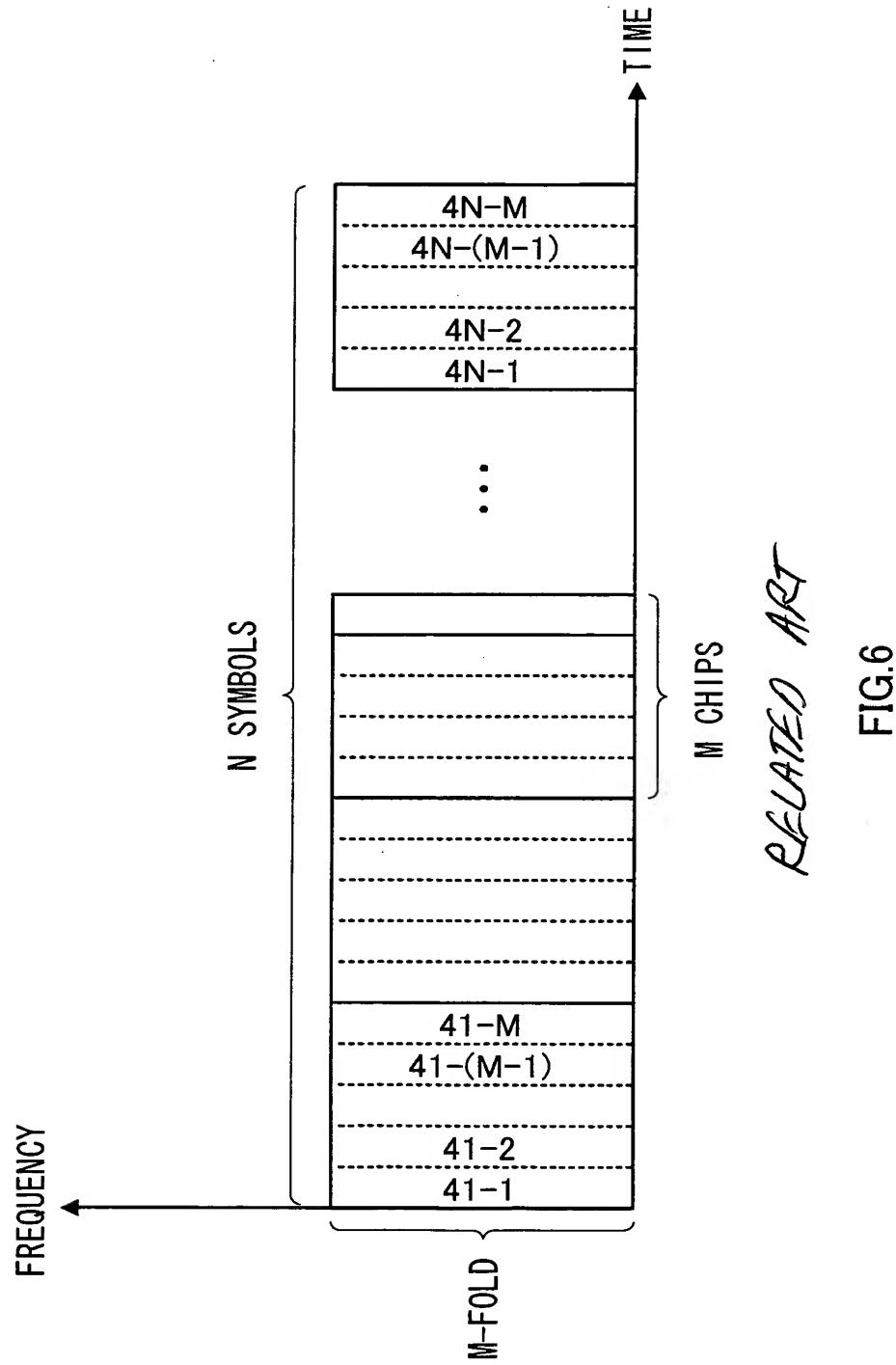


Related Art

FIG.5

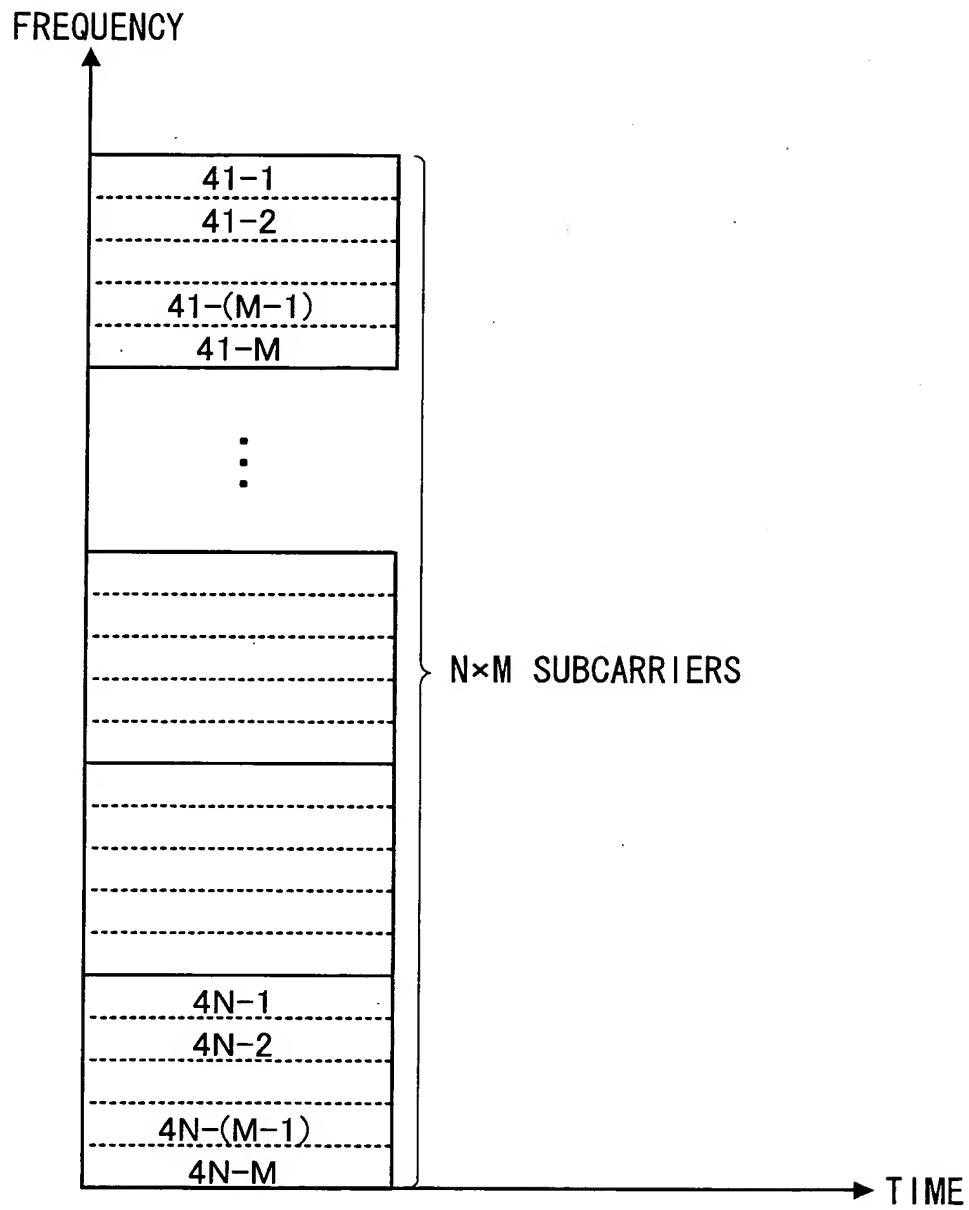
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RELATED ART

FIG.7